

The Maryland Fruit Grower

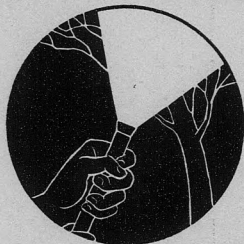


April, 1933



Maryland State
Horticultural Society

THE FINER THE SULPHUR



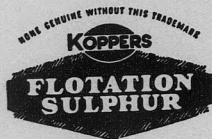
THE Surer THE PROTECTION

to leaf surfaces, altho this is not a definitely established fact. It seems to be probable that if dusting sulfur can be produced in the form of a much finer powder, so that its particles approach those of sulfur deposited from lime-sulfur sprays in smallness of size, the mechanical loss of the dusted sulfur soon after its application to foliage can be correspondingly reduced. While the comparative fungicidal efficiency of different forms of sulfur sprays and dusts can only be determined by actual plant pathological studies, it would appear that fineness, or smallness of size of particles, of the sulfur is a major, if not the controlling, factor in the adherence of the material to foliage and in the rate at which it will be converted into toxic forms by oxidation, and probably therefore in its fungicidal efficiency.

Concluding extract from Bulletin No. 116 of the New York State Agricultural Experiment Station at Geneva, N.Y., by R. W. Thatcher and Leon R. Streeter.

Your profit depends on the grade of your fruit. That's why Koppers Flotation Sulphur is the best profit-insurance you can buy. Sulphur controls fungous diseases, such as Scab and Brown Rot in proportion to the fineness of its particles; the finer the sulphur the more effective the control. Koppers Flotation Sulphur, in Dry Wettable, Dust and Paste forms, is the finest on the market . . . so fine it cannot be measured by mesh size! Priced right!

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NOTE:—Koppers is the only flotation sulphur which has been thoroughly tested and approved by Agricultural Experiment Stations.

Maryland ♦ Fruit ♦ Grower

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THE ARSENICAL RESIDUE IN MARYLAND

*Ernest N. Cory & P. D. Sanders**

With the exception of local accumulations of codling moth, the insect has not been so numerous as to jeopardize the value of the apple crop. In commercial orchards rarely more than 5% of the crop has been unfit for commercial packing due to the feeding of the codling moth. There are one or two orchards on the Eastern Shore, where inadequate equipment and insufficient man power has allowed the codling moth to increase very much beyond the normal and to cause high percentages of damage. In the majority of our commercial orchards 5% is considered a large toll.

In 1925 the seizure of northwestern fruit by British authorities due to excess arsenical residue, brought public officials and fruit growers face to face with a situation that had to be met if the exporting of apples was to be continued. Through negotiations by the U. S. Department of Agriculture the movement of fruit was allowed to continue on the basis that the officials in this country would make a progressive reduction in the arsenical tolerance. By confidential letters to growers and shippers of apples and pears each year since, the Secretary of Agriculture has announced an arsenical tolerance lower than that of the previous year until now the arsenical tolerance of 0.01 grains per pound of fruit has reached the world tolerance. It is an arbitrary stand with little basis from the toxicological standpoint, but represents the standards that must be met by the grower.

Prior to 1925, Maryland growers were accustomed to making arsenical spray applications late in the summer when the prevalence of codling moth seemed to warrant extra spray applications. Announcement of the arsenical residue tolerance necessitated a complete revision of the Maryland spray program. This has been done by setting the limit for arsenical applications as July 15. In order that this spray program might be successful it became necessary to emphasize the need for much more thorough work and the addition of extra cover sprays prior to July 15 that would maintain a complete coverage upon the foliage and fruit during the period that the first brood codling moth was active. This complete change in the program has worked out very satisfactorily, the growers have cooperated splendidly, and with a few exceptions no arsenical sprays have been applied to Maryland fruit after July 15. In one or two instances, due to circumstances that seemed to be beyond their control at the time, some growers have sprayed as late as July 20, but this has been the exception. In only one case has it been found

*Formerly with the Maryland Extension Service.

necessary by the Department of Entomology to advise an arsenical spray after July 15. This occurred in an Eastern Shore orchard this year that was undermanned and under-equipped. We feel confident that in the majority of cases the codling moth can be kept under control by the maintenance of a thorough coverage of poison on the foliage from the time of the petal fall spray to the end of the entrance of first brood worms, or approximately July 15, coupled with close attention to sanitary measures to reduce the winter carry-over. This last application will, under ordinary conditions, last two or three weeks and provide sufficient poison to kill the early appearing second brood codling moth larvae. By following the supplementary treatment to reduce the carry-over, such as banding of the trees with treated bands, destruction of cull fruit, and cleaning up of packing sheds and containers, the problem of spray control has been greatly reduced.

Dr. A. L. Sullivan, Commissioner of Foods and Drugs of the State Department of Health has cooperated very closely with this department and without his assistance the progress which has been made would not have been possible. His office is concerned primarily with the protection of the health of the people, while this office is concerned with the production of quality fruit from the standpoint of insect and disease control. Unless insects are controlled, the grower will have little to offer the public, but it goes without saying that the public is entitled to purchase fruit that is free from any deleterious material that would affect the health adversely. By agreement with the State Department of Health a preliminary survey of the pre-harvest condition of fruit was begun in 1925. This survey indicated that there was very little fruit in the state that had any excess residue and the growers of fruit that showed any excess were advised that those varieties showing excess would have to be treated in such a manner as to bring the residue within the tolerance. This method of pre-harvest surveys of fruit was continued up to 1930. Workers at the University*, including members from the Horticultural, Pathology and Entomology departments and inspectors of the Maryland State Department of Markets took the samples in the orchard that were later sent to the State Department of Health for analysis. In the early stages of the work, these results were forwarded the growers from the office of the State Entomologist, but in later years, in order that the men issuing the shipping point certificates might have prompt knowledge of the condition of the fruit they were certifying, the results were sent through the Maryland State Department of Markets.

In 1930 the Bureau of Agricultural Economics refused to issue export form certificates except on the basis of car lot analysis. Therefore, it became necessary to place a chemist in a temporary laboratory at Hancock, who could handle the car lot analyses. Fortunately the demand of the Bureau of Agricultural Economics for this type of inspection was rescinded in 1931 and we resumed the orchard analysis and issuance of export certificates based upon such analysis. The preharvest analysis of the condition of the fruit is advantageous in that it permits a much more rapid handling of most of the fruit. Only that fruit shown to be above the tolerance requires special attention in the packing shed. Re-analysis of such fruit usually shows that the weathering in the orchard or the method of handling in the packing shed has brought the fruit within the tolerance at the time that the

*Special mention should be made of the help of Messrs. Graham, Brannon and Crosthwait of the Entomology Department, Vierheller and Schrader of the Horticultural Department, and Shaw, Beavens and other inspectors of the Maryland State Department of Markets.

fruit is ready for shipment.

During the course of this work, from 1926 to 1929, an ever increasing number of samples was taken by the several agencies cooperating at the University of Maryland and analyzed in the laboratory of the State Food and Drug Commissioner with no excess residues at the time of harvest, despite the fact that the tolerance was progressively reduced from 0.025 to 0.015 grains per pound during that period.

In 1930, 346 car lot samples taken from 31 shippers were examined at the temporary Hancock laboratory. Of these, 9 samples carried 0.01 grains per pound and 3 samples from 0.01 to 0.02 grains per pound, but of these only one sample was found above 0.015, the tolerance set for that year. At the State Department of Health's laboratory 214 samples from 44 orchards were analyzed. Seventy-eight of these samples represented fruit ready for shipment and the balance represented orchard samples. Three car lot samples contained as high as 0.01 grains per pound, and 9 showed 0.015 grains per pound or higher. This fruit was brought into grade by washing. The other orchards that ran above the tolerance were brought within grade at harvest time through weathering and the use of brushes.

In 1931, 514 preharvest samples were taken, and of these 45 showed arsenic in excess of the tolerance of 0.012. Fifteen of these samples were brought within the tolerance at harvest time by two companies utilizing washing machines, and the balance came within the tolerance due to weathering up to time of harvest.

In 1932, 407 orchard samples were taken, representing 83 orchards. Of these 59 showed analyses in excess of the arsenical tolerance of 0.01 grains per pound. Eleven of these samples were taken from orchards which had washing machines available and 9 of the samples that showed excess represented 2 re-analyses of the fruit of 3 varieties from a single orchard where it was found necessary, owing to the excessive codling moth accumulation, to recommend a spray on the 15th of August. Due to heavy rains just prior to picking, these samples finally came within the tolerance. The balance of these that showed excessive residues at the preharvest period also came within the tolerance.

The health of the consumers of Maryland apples has been amply safeguarded by the cooperation of the growers in eliminating sprays after the 15th of July and by the efficiency of the Food and Drug Commissioner's staff in making prompt analyses of all fruit that is to be offered for sale. That there has never been a case of seizure of Maryland fruit is undoubtedly a cause for congratulation. Along with this change in the spray procedure to meet the demands for arsenic free fruit, there has been a progressive reduction in the amount of codling moth infestation in most of the commercial orchards, except during the excessively hot and dry season in 1930. During that year the codling moth infestation ran higher than ever before, but in 1931 and 1932 there has been a reduction in codling moth infestation in general. Only one or two orchards in the state shows a high codling moth infestation and in these cases vigorous efforts are being made by sanitary methods to reduce the carry-over so that the normal spray program will take care of these heavy infestations. Efforts to find substitutes for arsenic are being pushed diligently.

In conclusion, I wish to say a word in defense of entomologists generally with regard to the use of arsenicals. While I know that there is a

feeling among many well informed entomologists that the arsenical residues would not actually constitute a menace to public health and that it is very difficult to bring forth specific cases of actual poisoning by arsenical residues on produce, nevertheless they have attempted to find substitutes and the search is still in progress. We in Maryland have conducted a large number of tests of various materials that might be utilized and are continuing the search with greater efforts in 1933.

In view of this information Maryland growers should have confidence in the schedule sent out by the Spray Service and should adhere strictly to the schedule. Any developments will be given out promptly.

EASTERN APPLE GROWERS' COUNCIL

The Council is composed of the Presidents of the Horticultural Societies, east of the Missouri River. Organized May 11, 1932, this group has been active in export marketing and held their first annual meeting in Washington, D. C. on March 11, 1933. Officers elected for 1933 were: President—H. F. Byrd, Virginia; First Vice-President—J. N. Dyer, Indiana; Second Vice-President—R. T. Criswell, Pennsylvania; Third Vice-President—H. M. Rogers, Connecticut; Secretary-Treasurer—W. S. Campfield, Virginia.

It was a busy meeting. These men are actual fruit growers, and realizing the possibility of a large crop and unsettled market in 1933, a committee reported upon the export shipment of unclassified apples and its sad effect upon our export trade. Unclassified fruit is a risk here at home, and usually a loss in export trade, beside demoralizing that market. It was suggested that a Federal law prohibit export of ungraded or unclassified apples. Such a law has been introduced in the U. S. Senate, and seems necessary, for if we don't watch our step, our foreign buyers may clamp more serious restrictions and embargoes on American apples, no matter what grade they may be.

The residue problem was discussed and a committee was appointed to meet the Federal officials to find out where we now stand and what future policies are proposed regarding spray residue.

It was also proposed that fruit growers be represented in any conferences of agricultural groups, having to do with farm or economic measures. A resolution to this effect was presented to Secretary of Agriculture Wallace.

A resolution was sent to the Crop Reporting Section of the U. S. Bureau of Agricultural Economics requesting that crop estimate reports make a distinction between summer and winter varieties of apples, as present reports were misleading to grower and buyer.

It was decided to bring to the attention of Secretary of State Hull, the present condition of export fruit markets, and at the proper time, to ask consideration of the fruit industry, when the foreign market situation, in general, is brought up for attention by the Congress.

Maryland was represented at the Council meeting by Messrs. G. S. L. Carpenter, J. A. Cohill, T. B. Symons, J. H. Beaumont, S. B. Shaw, Joseph Harrison, and A. F. Vierheller.

There is little question' of the value of the Eastern Apple Growers' Council. It is the organized effort of the fruit growers of Eastern United States, to work in mutual cooperative effort to solve the growers' problems. The meetings are open to any fruit grower, although each state represented has but one vote. The efforts of the Council add great value to the power of State Horticultural Societies, and also show one more reason why *you* should become an active, paid-up member of your Horticultural Society.

FREEZE INJURY

New Jersey Department of Agriculture, in a report "Market Conditions" on March 22, reports slight damage to the commercial peach crop. They state that the Cornelia section of Georgia about 85% bud kill is reported. Other sections seem safe, with financial aid more of a limiting factor than bud injury. Some orchards have been neglected and some abandoned. The Carolinas, Virginia, Maryland and Delaware have spotty injury, or rather a thinning of some varieties in some sections. Arkansas and Missouri report no crop left, and Tennessee has about 15% left in the eastern part of the state. Illinois reports a heavy kill with estimated reduction of about 4500 cars of peaches.

A recent issue of the "New York Packer" reports considerable freeze damage in Michigan.

It is to be remembered that this is merely estimated bud injury, but it gives some estimate of what crop to expect. Most sections seem to be greatly concerned over neglect of orchards, due to credit and financial conditions.

A NEW ORGANIZATION

The Maryland Department of Markets, News Letter of March 1, 1933, gives the following report:

"On February 13 a group of Maryland farmers operating roadside markets assembled in Baltimore and organized the Maryland Farmers' Roadside Market Association.

"The objects of the Association are to bring about closer association and protection of Maryland farmers who operate bona fide farmers' roadside markets; to enable its members to secure benefits that come through organization; to disseminate information relative to marketing activities of roadside markets in general; to secure uniformity as to grade and prices of products offered for sale by its members; to adopt a 'quality' label for the protection of both the consumer and producer, which label will identify to the consumer the character of the product sold by members of the Association; to adopt a suitable sign whereby roadside markets operated by its members may be distinguished from non-members; and to foster and encourage the interchange of the different commodities produced by farmers in different parts of the State.

"It was further adopted by the Association that 75 per cent of the pro-

ducts sold on their markets shall be Maryland farm products; and they agree further to sell an honest package of full weight, count or measure and one whose surface truly represents the contents; to use no false or misleading labels or signs; and to provide ample parking space off the highway.

"After the adoption of the constitution and by-laws, and after making the necessary provision for securing a uniform sign for identification of their market and other details involved in organization proceedings, the following officers were elected:

A. H. Nofsinger, Baltimore County, President.

Granville Hibberd, Baltimore County, Vice-President.

E. P. Walls, Prince George's County, Secretary-Treasurer.

Dr. H. Hoopes, Harford County, Member Executive Committee.

Mrs. Howard Mann, Howard County, Member Executive Committee."

GOING AHEAD

After having visited fruit growers and having attended their meetings in nearby states, it is refreshing to hear the note of optimism, in spite of the many trials and difficulties, that the past, present and future developments of the industry have brought. Many growers are going along on an economy basis. In several cases, it is almost a matter of going along "on a shoestring." It may be interesting to tell a story of a man who won his fame on a violin string. Here it is:

"The story goes that Paganini, most renowned of violinists, stood as a young artist, almost unknown, before a sophisticated and critical audience, about to launch one of his programs with a Bach aria. He touched the E string of his violin and it snapped. The audience was tensely silent. He touched the A string and it snapped. The audience laughed. He drew his bow across the D string and it, likewise, snapped. The audience hissed. There was an electric pause, and Paganini drew his bow across the sole remaining string, the G, in the first note of the aria; and he played, as only Paganini could play, the entire selection on that string.

"The aria thus was immortalized as Bach's 'Air for G String'. And Paganini by his artistry, courage, and resourcefulness likewise was immortalized, with an ovation which still rings down through history.

"Men of resourcefulness and courage and ability can still carry on and accomplish marvels of success in the face of obstacles that would sweep the unfit into the discard."

STRAWBERRIES

Estimates of strawberry acreages, by the U. S. Division of Crop and Livestock Estimates, shows 4% increase in Delaware and 6% in Maryland. Great increases are reported in plantings of the Blakemore variety. Estimated acreage changes compared to 1932 are reported as follows: Early States, 160 acre decrease; Second Early States 6900 acre increase; Intermediate States, (Maryland included) 4400 acre increase; Late States 1590 acre decrease.

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4,000 York Imperial, large 2 and 3 year old Trees, especially suited for replanting, at \$20.00 per hundred, or \$160.00 per 1,000. Don't miss these as they are just the thing for replanting your York orchards. Plant plenty of Richared Delicious and Black Staymans, they will make you money. 5,000,000 Strawberry plants. Best money making varieties. Blackberries and Raspberries. Also Grapes and Currants.

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MORE TRUTH THAN POETRY

The story of "washing" of farm land in the Eastern United States is a sad reflection upon our past and present farming methods. Millions of acres of fertile soil have been allowed to run down the creeks and rivers, and there are thousands of good farms that are now marginal farms because the top soil is washed away. The New Jersey State Horticultural Society News, March 1933, expresses the thought in a simple rhyme:

"Hordes of gullies now remind us,
We should build our lands to stay,
And departing leave behind us
Fields that have not washed away.

"When our boys assume the mortgage
On the land that's had our toil,
They'll not have to ask the question
Here's the farm, but where's the soil."

REMINDERS

Cultivate peach orchards early. Store orchard crates in a tight building to keep codling moth and Oriental moth from flying from crates to orchard. Be ready for quick action on the pink spray. Very little time left for grafting. Don't let up on mouse control. Place bee hives for pollination.

Mike—"Jones' dad made a fortune in crooked dough."

Ike—"Was he a counterfeiter?"

Mike—"No, a pretzel manufacturer."

* * *

"Is Mike Howe here?"

"My good man, this is an apple orchard, not the stock yards."

• • •

The 1933 Annual Proceedings of the Society, containing reports of January meetings, were mailed to *paid-up* members on March 25. Did you get your copy?

• • •

Every attempt is made to carry real and interesting information to growers, in the Maryland Fruit Grower. Let's have your suggestions as to how the paper may be improved. We want criticisms, too.

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Active ingredients (Refined Sulphur) 99%. Finely dispersed.
Instantly wettable. Ideal for use in combination with Arsenate of
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"I have used Scalecide and Sulfocide for three years, and would not think of using anything else."

D. W. M., Pa.

"I have used Scalecide and Sulfocide more than five years. It is the best spray I have ever used."

D. S. R., Mass.

"I can thoroughly say that Scalecide and Sulfocide has nicotine skinned a mile, and the results are thoroughly 100%. I have used this continuously for five or six years. Last year I had perfect control of scab."

W. M. D., West Va.

"Last season I gave your Scalecide and Sulfocide a thorough trial. I am certainly most pleased with results. That it controlled aphid so well pleased me most, as nicotine poisons me so badly that I cannot use it."

W. B. B., Maine.

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